Amendments to the Specification

Please replace the paragraph beginning at page 8, line 9 with the following rewritten paragraph:

SEQ ID NO:1 shows the ospA DNA sequence from P. salmonis

SEQ ID NO:2 shows the amino acid sequence of the precursor (unprocessed) protein OspA

SEQ ID NO:3 shows the ospA DNA sequence, 17e2, modified for optimal codon usage in E. coli

SEQ ID NO:4 shows the amino acid sequence of the modified for optimal codon usage, in E. coli, precursor (unprocessed) protein OspA (17E2)

SEQ ID NO:5 shows the DNA sequence, c17e2, of an N-terminal fusion partner with optimized ospA gene

SEQ ID NO: 6shows the amino acid sequence of an N-terminal fusion partner with optimized OspA (C17E2)

SEQ ID NO:7 DNA sequence of the forward oligonucleotide used during pTYB1-17kDa construction

SEQ ID NO:8 DNA sequence of the reverse oligonucleotide used during pTYB1-17kDa construction

SEQ ID NO:9 oligonucleotide #1 used for construction of optimized ospA gene, 17e2

SEQ ID NO:10 oligonucleotide #2 used for construction of optimized ospA gene, 17e2

SEQ ID NO:11 oligonucleotide #3 used for construction of optimized ospA gene, 17e2

SEQ ID NO:12 oligonucleotide #4 used for construction of optimized ospA gene, 17e2

SEQ ID NO:13 oligonucleotide #5 used for construction of optimized ospA gene, 17e2

SEQ ID NO:14 oligonucleotide #6 used for construction of optimized ospA gene, 17e2

SEQ ID NO:15 amino acid sequence of a 10 residue synthetic polypeptide based on residues 110-119 of OspA

SEQ ID NO:16 amino acid sequence of a 20 residue synthetic polypeptide based on residues 110-129 of OspA

SEQ ID NO:17 DNA sequence of the tt P2 TCE oligonucleotide

SEQ ID NO:18 DNA sequence of the MVF TCE oligonucleotide

SEQ ID NO:19 amino acid sequence of the tt P2 TCE

SEQ ID NO:20 amino acid sequence of the MVF TCE

Please replace the paragraph beginning at page 28, line 5, with the following rewritten paragraph:

Peptide	Sequence
10 mer (SEQ ID NO:15)	Pro-Val-Arg-Thr-Tyr-Gln-Arg-Tyr-Asn-Lys
20 mer (SEQ ID NO:16)	Pro-Val-Arg-Thr-Tyr-Gln-Arg-Tyr-Asn-Lys-Gln-Glu-Arg-Arg-Gln-Gln-Tyr-Cys-Arg-Glu

Please amend the paragraph at page 31, line 7 with the following rewritten paragraph:

Table 3: Oligonucleotide primers used during construction of pTYB1-17kDa. Bold nucleotides are not homologous to the template *ospA* ORF.

Primer	Sequence
Forward (SEQ ID NO:7)	5' – GAG AGA **ACA** **TAT** GAA CAG AGG ATG TTT GCA AGG – 3'
Reverse (SEQ ID NO:8)	5' – GCC ATA **AGC** **TCT** **TCC** **GCA** TTT TTC TGT TGA AAT GAC TTG C – 3'

Please amend the paragraph beginning at page 31, line 11 with the following rewritten paragraph:

Coho salmon antibody response to the OspA with N-terminal fusion partner vaccine candidate (Example 4) was assayed by enzyme linked immunosorbant assay (ELISA). Coho salmon fry (125 per group; ~15 g mean weight) were each injected intraperitoneally (IP) 0.2 ml of a formalin inactivated (1 ml/L) adjuvanated (~~Microgen~~ MICROGEN™) vaccine (5:1

vaccine:adjuvant) containing 50 μg of total protein purified as the insoluble fraction from *E. coli* BL21 expressing the *ospA* fusion construct pET-C17E2 (Example 4). A control group of fish received 0.2 ml of adjuvant diluted with saline 5:1. A second control group was comprised of non-vaccinated salmon.